



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,523	09/23/2003	Craig Weissman	021735-000400US	5140
20350	7590	10/21/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			PHAM, KHANH B	
			ART UNIT	PAPER NUMBER
			2166	

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/669,523	Applicant(s) WEISSMAN ET AL.	
	Examiner Khanh B. Pham	Art Unit 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/23/03</u> . | 6) <input type="checkbox"/> Other: _____ |

PD

DETAILED ACTION

Drawings Objection

1. A **descriptive** textual label for **each numbered element** in these figures would be needed to fully and better understand these figures without substantial analysis of the detailed specification. Any structural detail that is of sufficient importance to be described should be shown in the drawing. Optionally, applicant may wish to include a table next to the present figure to fulfill this requirement. See 37 CFR 1.83. 37 CFR 1.84(n)(o) is recited below:

"(n) Symbols. Graphical drawing symbols may be used for conventional elements when appropriate. The elements for which such symbols and labeled representations are used must be adequately identified in the specification. Known devices should be illustrated by symbols which have a universally recognized conventional meaning and are generally accepted in the art. Other symbols which are not universally recognized may be used, subject to approval by the Office, if they are not likely to be confused with existing conventional symbols, and if they are readily identifiable.

(o) Legends. Suitable descriptive legends may be used, or may be required by the Examiner, where necessary for understanding of the drawing, subject to approval by the Office. They should contain as few words as possible."

The drawings are objected to because they fail to show necessary textual label of features or symbols in Figs. 1-3 as described in the specification. For example, place a label "User system" with element 12, "network" with element 14, and "Multi-tenant database system" with element 16 of Fig. 1 would give the viewer necessary detail to fully understand this element without substantial analysis and interpretation of the specification.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2166

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 1-25 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Galindo-Legaria et al. (US 2005/0050041 A1) and in view of Guthrie et al. (US 6,587,854 B1), hereinafter "**Galindo**" and "**Guthrie**".

As per claim 1, Galindo teaches a method of optimizing a query in a database comprising:

- "generating view-level statistics for each of said plurality of view for each of the data table" at page 5, [0068];
- "receiving a SQL query" at page 5, [0067];
- "optimizing the SQL query based on the view-level statistic" at page 5, [0067]-[0069].

The difference between Galindo teaching and the invention of claim 1 is that Galindo uses "view-level statistic" instead of "tenant-level statistic" as claimed.

Art Unit: 2166

Applicants' specification defines "tenant-level statistic" is "number of rows accessible per tenant" (page 12 lines 15-17), which is a subset of all rows in the database. Galindo teaches that "view level statistic" includes total numbers of distinct rows of the view ([0069]), which is a subset of all rows in the data table. Further, multi-tenant database is well known in the art, in which each tenant is allowed to access a subset of rows in a data table, as exemplary by Guthrie. Guthrie teach a multi-tenant database having one or more data tables, each table having one or more logical columns defining data categories and one or more logical rows associated with one or more tenants, wherein a plurality of tenants have data stored in the data tables" at Col. 4 line 66 to Col. 5 line 15. Each of Guthrie's "enterprise portioned data" is similar to Galindo's view, both comprise a subset of all rows in the database table. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was make to combine Galindo and Guthrie's teachings to optimize query based on enterprise-level statistic (i.e., "tenant level statistic") in a multi-tenant database, in order to provide more accurate method and reduce the processing time since only a subset of data which associated with a particular tenant are processed instead of a whole table.

As per claim 2, Galindo and Guthrie teach the method of claim 1 discussed above. Guthrie teaches: "wherein each tenant includes one or more associated users" at Col. 5 lines 64-67. Galindo also teaches:

- "generating user-level statistics for each user of each tenant for each of the data tables" at page 5, [0068]; and
- "optimizing the SQL query based on the user-level statistic" at page 5, [0069].

As per claim 3, Galindo and Guthrie teach the method of claim 2 discussed above. Galindo also teaches: “wherein the user-level statistics are stored to a user-metadata table” at page 5, [0068].

As per claim 4, Galindo and Guthrie teach the method of claim 2 discussed above. Galindo also teaches: “wherein generating user-level statistics includes determining a total number of distinct rows for each of said plurality of users” at page 5, [0069].

As per claim 5, Galindo and Guthrie teach the method of claim 4 discussed above. Guthrie also teaches: “wherein the total number is an approximate number based on one or more of a) a number of rows viewable by the user and user below the user in a role hierarchy, b) a number of rows that are shared by a group to which the user belongs and c) a number of rows that are manually shared to the user by another user or group of users” at Col. 5 lines 1-6.

As per claim 6, Galindo and Guthrie teach the method of claim 2 discussed above. Galindo also teaches: “wherein generating user-level statistics for a user is performed according to one of a) on a schedule basis, b) after a predetermined number of queries by the user, and c) each time an unconstrained query is run by the user” at page 5, [0068].

As per claim 7, Galindo and Guthrie teach the method of claim 1 discussed above. Galindo also teaches; “wherein generating tenant-level statistic is performed on a periodic basis” at page 5, [0068].

As per claim 8, Galindo and Guthrie teach the method of claim 1 discussed above. Guthrie also teaches: “wherein generating includes determining a total number of distinct rows accessible for each of said plurality of tenant” at Col. 5 lines 1-6.

As per claim 9, Galindo and Guthrie teach the method of claim 8 discussed above. Galindo also teaches “the tenant level statistics are stored to a tenant metadata table” at page 5, [0068].

As per claim 10, Galindo and Guthrie teach the method of claim 1 discussed above. Guthrie also teaches: “wherein at least one column of one of said table include data associated with two or more tenants” at Col. 6 lines 35-50.

Claims 11-25 recite a system and method comprising similar limitations as in claims 1-10. Claims 11-25 are therefore rejected by the same reasons.

Conclusion

5. The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Craney whose telephone number is (571) 272-3574 for faster service.

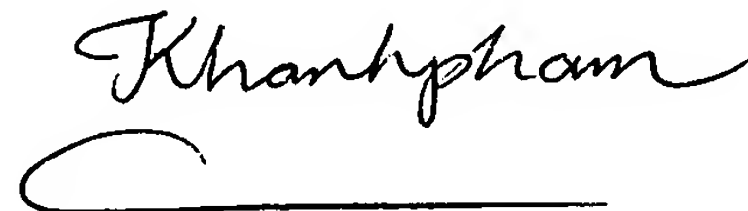
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Pham whose telephone number is (571) 272-4116. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khanh B. Pham
Examiner
Art Unit 2166

October 14, 2005

A handwritten signature in cursive script, reading "Khanh B. Pham", with a long horizontal flourish underneath.